

What is claimed is:

1. A binocular having digital image storage function,
comprising:

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a binocular including two body tubes, each of which
being separately provided at two ends with an
objective lens and an eyepiece, and a prism being
disposed between said objective lens and said
eyepiece; and

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a digital image storage unit being located between
said two body tubes and including at least an image
sensor for taking an image, a shutter key for
controlling said taking of image by said image
sensor, a driver and a microprocessor for
compressing an image taken by said image sensor and
storing said compressed image in a memory; and

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said binocular and said digital image storage unit
having parallel optical axes, so that an image taken
by said digital image storage unit is the same as
a picture being seen by a user via said binocular,
enabling the user to take desired images with said
digital image storage unit.

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2. The binocular having digital image storage function

as claimed in claim 1, wherein said digital image storage unit further includes an audio signal processing system, in which a microphone receives an audio signal that is converted into a digital
5 signal at an analog/digital conversion circuit and then sent to said microprocessor, so that said converted audio signal is compressed and stored in said memory.

10 3. The binocular having digital image storage function as claimed in claim 1, wherein said image taken by said digital image storage unit is output to a personal computer via a universal serial bus.

15 4. The binocular having digital image storage function as claimed in claim 2, wherein said image and said audio signal taken and received by said digital image storage unit are output to a personal computer via a universal serial bus.

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5. The binocular having digital image storage function as claimed in claim 1, wherein said binocular further comprises a semitransparent reflection mirror disposed in front of a focus of one said
25 eyepiece at a 45-degree angle relative to an optical axis of said eyepiece, and said digital image storage unit including a mini liquid crystal display

(LCD) panel disposed at a point immediately below said focus corresponding to said reflection mirror, so that said image taken by said digital image storage unit is displayed on said mini LCD through a driver; and wherein said digital image storage unit further comprises a push button for controlling a display status of said mini LCD; whereby when a user views at said eyepieces while a display power is cut off, what being seen by the user is the same as an image that could be seen with an ordinary binocular, and when the user views at said eyepieces while a display power key is held in a depressed position and a front side of said objective lenses is shielded with one hand, what being seen by the user is a magnified image on said mini LCD, that is, an image exactly taken by said digital image storage unit.

6. The binocular having digital image storage function as claimed in claim 2, wherein said binocular further comprises a semitransparent reflection mirror disposed in front of a focus of one said eyepiece at a 45-degree angle relative to an optical axis of said eyepiece, and said digital image storage unit including a mini liquid crystal display (LCD) panel disposed at a point immediately below said focus corresponding to said reflection mirror,

so that said image taken by said digital image storage unit is displayed on said mini LCD through a driver; and wherein said digital image storage unit further comprises a push button for controlling a display status of said mini LCD; whereby when a user views at said eyepieces while a display power is cut off, what being seen by the user is the same as an image that could be seen with an ordinary binocular, and when the user views at said eyepieces while a display power key is held in a depressed position and a front side of said objective lenses is shielded with one hand, what being seen by the user is a magnified image on said mini LCD, that is, an image exactly taken by said digital image storage unit.

7. The binocular having digital image storage function as claimed in claim 1, wherein said binocular has optical specifications suitable for observing a mid-range scene about 50 to 200 meters away, and all or some of said objective lenses and said eyepieces being made of plastic lenses; and said optical specifications for said binocular including:

Magnifying power: within the range from 5X to 8X;

Clear aperture: within the range from 15 to 25mm;

Length-to-breadth ratio of field of view: 4:3; and

Diagonal view angle: within the range from 5 to 7
5 degrees.

8. The binocular having digital image storage function
as claimed in claim 1, wherein said binocular has
a rectangular field of view, and said rectangular
10 field of view having a length-to-breadth ratio of
4:3 which is the same as that of said image sensor
in said digital image storage unit.